Turbomachinery and Propulsion Systems Division
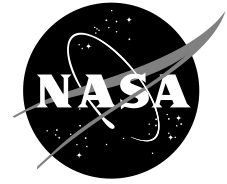
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Unclassified

Positional Iterators

The **GPosit** interface encapsulates the mechanics of traversing an ordered set which may be changing during the time of traversal. This capacity is used by the **GLock/GLockCtx** interface pair to allow traversal of conflicting lock contexts while lock activity continues.

1. At iterator initialization, the ordered set is traversed and identifiers transferred to the iterator. For brief element visitations, this is not a highly efficient choice.

2. The initialized iterator becomes a 'successor' of the controlling element of the ordered set (using **GObject** base functionality).

3. Each successor iterator is informed of each subsequent addition to the set. The iterator may choose to 'go back' and pick up such new elements even though traversal may already be beyond that point.

4. Each successor iterator is similarly informed of deletions from the set. Iterators note such deletions, but retain the element so that, should the current position be on that element, a nasty re-positioning search will not be required.